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Partnering as success factor: optimal design quality through the early integration of construction and operation competences

- Challenges in the implementation of sustainability factors
- Processes and instruments for the creation of buildings optimized in terms of operating and construction costs
- Examples of projects that have already been implemented

Summary

Nearly all designs can be optimized. Today, this realization is familiar to all those in the construction and real-estate industries who take into consideration all five of the lifecycle phases of a property (development, design, construction, operation, revitalization) as well as their interdependencies. Nevertheless, new buildings are still being built or existing buildings structurally altered with designs that sometimes show serious deficiencies. A few examples worth mentioning here include oversized technical building equipment components, a lack of coordination between facade and technical building equipment concepts, use of materials with high maintenance costs or a lack of coordination between foundation and framework construction.

This leads to additional difficulties in the later operation of the building and, as a result, the owner of the property is faced with unnecessarily high costs for cleaning and maintenance. Particularly facade components that are impossible to reach and the selection materials such as surfaces, construction components and technical equipment that does not take future use or useful life into account leads to increased costs for building operation. Doing without things like inspection flaps, energy meters for each individual unit or external water taps may seem economical but, through increased time and personnel expenses, building operations are made unnecessarily expensive.

The total of these apparently small design failures can, in the end, add up to a design solution that can be described as sub-optimal at best. The client, however, is justified in his expectation that his property be designed economically, i.e. optimized in terms of both construction and operating costs.

For this reason, Bilfinger Berger Hochbau GmbH has for many years been calling for an early involvement in the design phase of a project so that we can contribute existing design, execution and operating competences to an interdisciplinary design team. This model, known as partnering, has been successfully implemented in numerous projects in Germany. The preconditions for such a successful implementation of partnering models are the early involvement in the design process, a high degree of technical expertise in all lifecycle phases as well as the willingness to cooperate on an interdisciplinary basis. The advantage is a win-win situation for all those involved in the project because costs, deadlines and quality can be presented transparently and flexibly through a thorough and coordinated design.